ANNUAL REPORT

for the fiscal year
ending March 31, 1985

Victoria General Hospital

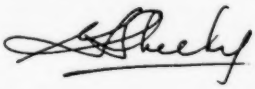
TO:

The Honourable Alan Abraham, C.D.
Lieutenant-Governor of Nova Scotia

May It Please Your Honour:

I beg to present herewith the Annual Report of the Victoria General Hospital for the period of April 1, 1984 to March 31, 1985.

Your Obedient Servant,



Halifax, Nova Scotia
March 1985

G. Sheehy
Minister of Health

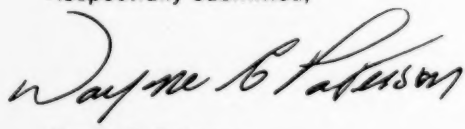
TO:

The Honourable Dr. G. Sheehy
Minister of Health
Province of Nova Scotia
Halifax, Nova Scotia

Dear Mr. Minister:

On behalf of the Board of Commissioners, it is my pleasure to submit to you the 118th Annual Report of the Victoria General Hospital covering the period April 1, 1984 to March 31, 1985.

Respectfully submitted,



Wayne C. Paterson
Chairman
Board of Commissioners
Victoria General Hospital

Mr. Wayne C. Paterson
Chairman, Board of Commissioners
Victoria General Hospital
Halifax, Nova Scotia

Dear Mr. Paterson:

I am pleased to submit the 118th Annual Report of the Victoria General Hospital for the period from April 1, 1984 to March 31, 1985.

The Victoria General Hospital continued to serve as the primary adult tertiary care hospital in the Province of Nova Scotia as well as serving the people of the metropolitan Halifax area, providing exemplary care for patients.

As you will note, this overview reflects a reorganization of the hospital's reporting structure along divisional lines as follows: Special Services, Medical Services, Nursing Division, Administrative Services and Educational Services. It is hoped that the more simplified structure will better define lines of responsibility and stimulate initiative.

During the year at hand, the hospital became involved with four other Canadian hospitals in a Value Improvement Process pilot project of the Travenol Management System, a tool to maintain or increase quality of care while reducing costs. The hospital also introduced a Patient Representative Program to facilitate better communications between the hospital and those it serves.

Outpatient programs continued to be initiated with one for arthritics being conducted in the Physiotherapy Department for a large population formerly not treated.

Occupational Therapy underwent a re-accredition survey during this period conducted by the Canadian Association of Occupational Therapists and resulted in another five-year accreditation (1985-90).

A series of meetings in regard to the hospital's projected Liver Transplantation Program established a protocol in a workshop attended by international experts. Details were presented at the Canadian Workshop on Liver Transplantation in Toronto.

The hospital was honoured when the Cardiology Service received from the National Institute of Health a six-year research contract valued at about $1 million to investigate left ventricular dysfunction. The hospital is one of only eight centres in North America and Europe to be participants in the study.

Meanwhile, the Coronary Care Unit expanded its capability to 12 beds, and a new monitoring system was installed.

A most significant advance in patient care at the hospital has been the development of a Stroke And Geriatric Assessment (SAGA) project which has been designed with the cooperation of Neurology, Geriatrics and General Medicine.

A highlight of the year's activities for Respirology Service was the opening of the Hyperbaric Oxygen Unit. One of only three multi-place units in Canada, the Unit provides treatment of carbon monoxide poisoning, decompression sickness, as well as specific infections including gangrene and osteomyelitis. It is also currently being used in a study of multiple sclerosis.

The hospital was involved in a clinical appraisal over a one year trial period for an inexpensive British produced CT Scanner, the M250 Euroscanner, through the help of the Department of Diagnostic Radiology.

A multi-organ transplant program was established in response to identified common needs in the four Atlantic Provinces and reflects the increasing scope of new and expanding transplantation programs.

This year the hospital's renal transplantation team transplanted 88 kidneys, boosting their total to 570 since the program began several years ago.

Support systems were also set up for families of cadaver donors and staff who care for multi-organ donors.

A major advance in hospital services was the inauguration of bone transplantation in Orthopaedic Surgery, thus permitting replacement of major portions of the skeleton lost as a result of cancer or other conditions.

Development of a Trauma Team resulted from collaboration with Emergency Department Physicians to expedite the care of multiple trauma victims.

In its first year, with the installation of a large scale Sperry 1100/72M main frame computer, the continuing growth plan over 2 1/2 years for a comprehensive patient-oriented Hospital/Medical Information System has been substantially established.

This has been an exceptional year of activity in which to serve as Executive Director of the Victoria General Hospital. I would like to acknowledge the energetic involvement of Staff and thank the Board of Commissioners for their enthusiastic support.

Yours very truly,

Richard L. Criddle
Executive Director

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E. Zayed, M.D., F.R.C.P.(C), Associate Hematologist

DIVISION OF SPECIAL SERVICES

In 1984 the Volunteer Services Department was added to the Division and the Patient Representative Program was developed, bringing the total number of departments to nine: Psychology, Physiotherapy, Pharmaceutical, Occupational Therapy, Dietetics, Social Work, Pastoral Care, Volunteers and Patient Representative.

Activities carried out through the divisional office during the 1984–1985 year included the following:

1. Coordination of the Masters degree in Health Administration's Student Summer Residency Program. While here the residents carried out the following special projects:

   — Echocardiographic Laboratory: comprehensive operations analysis
   — Review of Pharmacy Inventory Management System
   — Pastoral Care: study of religious listings on admitting forms
   — A study to document the opportunity for organized coordinated patient recreation programs
   — Preparation of a concept document to support the Psychiatry Department's request for the services of a recreation therapist for 9A.

2. Travenol Management System. The Victoria General Hospital took part in the pilot VIP project, along with four other Canadian hospitals, to examine the cost of the same three clinical procedures in each hospital. The process used by Travenol to cost the procedures was called the Value Improvement Process, a tool to maintain or increase quality of care while reducing costs. The results of the project would show the Best Demonstrated Cost for all five hospitals, the Best Demonstrated Cost from the U.S. and the Best Demonstrated Cost for North America.

3. Cost Review Task Force. The Director, Division of Special Services, held the position of chairperson on the Cost Review Task Force Committee. During the fall of 1984, a Special Cost Containment Symposium was undertaken to share with hospital managers the cost-saving efforts taking place within the Hospital and to introduce Operation Quality Review.

   The program for this two-day symposium included the

following: Best Demonstrated Cost — results of the Travenol study; Poster Presentation/Walk About — show and tell some of the success stories that resulted from the Cost Review Task Force; Costing studies — Laboratory and Radiology; Savings Reinvested — discover how the savings have been reinvested; Productivity Education Programs — A.H.A. productivity package and Saint John Regional Hospital program; Long Term Plans — V.G.H. Executive Director speaking on long-term plans related to cost containment; and An Overview of the Day, as well as an open discussion. There were 60 managers in attendance.

4. Operations Quality Review. This was developed by the Cost Review Task Force to provide managers with a systematic method of examining the activities of their departments/units to ensure that all activities support established Hospital objectives. By doing so, the quality and efficiency of these services provided could be improved. The first department to undergo such a process was the Department of Psychology. It was soon followed by Bio-Medical Engineering, Physiotherapy and Social Work. A slide/tape presentation of the process was also developed.

The following are outlines of the activities carried out within the individual departments of Special Services during 1984/85.

Chaplaincy Services

Church-appointed chaplains visit the sick, administer the sacraments and the rites of the churches, bring support to the families of the sick, respond to theological and ethical consultations, collaborate with the multi-disciplinary team with a view to better care of the patient and conduct in-service orientation for new staff.

During the past year the number of chaplains in the Hospital increased by approximately three people.

Dietetic Services

The *Operations Manual*, containing all major policies and procedures for the Department, was completed and is in use, with orientation provided to all supervisory, professional and clerical staff.

The Department produced 621,473 meal-days, an increase of

one per cent over previous years. Each dollar is divided as follows: 59 per cent labour, 30 per cent food and 11 per cent other.

There are eight internal departmental working committees that are essential for the attainment of Department goals. They include Forms, Dietary Safety, Quality Assurance, Menu, Attendance Improvement, Dietary Representative, Employee Award and Dietary Cost Containment-Evaluation, and Standardization of Products.

Renovations and rearrangements were carried out in the main dishroom, which was expanded to include a new pot wash area and a truck wash area. The vacated pot wash area was converted into the catering preparation area, improving the efficiency of production space. The rearrangement of offices and people in Food Production brought the cafeteria manager closer to the production area.

The Dietetics Department served approximately 3,000 staff during the Hospital picnic on the front lawn. Hot dogs, ice cream and soft drinks were the menu of the day.

The Internship Program graduated 10 dietetic interns.

Contact Food Service supervisor training was completed by eight students from the Nova Scotia Institute of Technology.

Nutrition services were provided to the Cancer Research and Treatment Foundation for the first time.

Outpatient services experienced major changes with improvements in the Nutrition Clinic's approach to weight control and individual counselling practices, and the dietary component of the Diabetes Education Centre. The total number of patients seen in the Nutrition Clinic was 2,306 and, in the Diabetes Education Clinic, 2,369.

Various studies and audits were carried out by the Dietary Department as follows:

— A nutritional risk audit was conducted with the approval of the Clinical Appraisal Committee.

— A dysphagia test tray program is now in place for assessing

which foods each stroke patient can handle. Recipes have been developed and incorporated into a dysphagia diet.

— A trial project of routine screening of hematology oncology patients on 8A was undertaken. The objective was to identify, on admission, patients with nutritional needs.

— The Nutritional Clinic program is being evaluated continuously. A completed package of evaluation tools is used to assess improvement in knowledge, eating habits, exercise habits and weight loss. The program evaluation from Nutrition Clinic indicates that objectives to increase knowledge, improve eating habits and promote weight loss are being met. The Nutrition Clinic was involved in a Dalhousie research project to study self-perceptions of people who are obese or anorexic.

— A nutrition care program for post-gastroplasty patients was initiated. In addition to in-hospital assessments, monitoring and teaching, outpatient follow-up is arranged for all patients. The new program required the development of a gastroplasty nutrition care plan, guidelines for use of the gastroplasty diet in hospital and a professional section for the *Victoria General Diet Manual*. This program has proved to be very effective, and 30–40 patients are being followed.

— A special project was conducted for the Department of Health to determine the raw food costs of special nutritional feedings. As a result of the report of the findings, a special account has been set aside for these nutritional products; they will no longer be included with raw food costs. This system will allow better control of the use and cost of these products.

Statistics

	1984-85
Patient Meal Days	351,851
Non-Patient Meal Days	269,622
Total Meal Days	621,473
Clinical Inpatient Consults	3,300
Clinical Inpatients Counselled	2,309
Clinical Outpatients —	
Diabetic Education	2,369
Clinical Outpatients —	
Nutrition Clinic	2,306
N.S. Rehab Contract Service	
Inpatients seen	136
Outpatients seen	102
Number Follow-up Visits	850

Patient Representative Program

In the fall of 1984-85 the Patient Representative Demonstration Program was introduced at the Victoria General Hospital.

The actual Patient Representative Program began in December, 1984. From then until March 31, 1985, 92 concerns were handled and three compliments were received.

Physiotherapy Services

A major activity of the Physiotherapy Department was to carry out the Operations Quality Review phases I and II.

Participation in the Stroke and Geriatric Assessment Program was considered successful for stroke care.

The Outpatient Program for Arthritics was initiated and has serviced a large population formerly not treated. A long-term management program for ankylosing spondylitis, including education, pain modification and exercise, was established.

A major effort was directed toward upgrading educational material for patients, including an automatic evaluation system.

A major overhaul of the pool was done to take care of construction problems.

	Statistics	
	Attendances	**Weighted Units**
Inpatients	43,084	971,130
Outpatients	27,152	639,112

Social Work Services

In the past year the Department accomplished these tasks:

— Joined with other community agencies and lobbied for protection services for abused and neglected adults.

— Cooperated with the Emergency Department and Quality Assurance and Risk Management to develop Hospital policies on family violence.

— Influenced the board of the Help Line to be more responsive to the needs of alcoholics in the patient population and then suggest programs to address the concern.

— Provided educational programs to various professional groups on topics such as alcoholism and addictions, family violence, elder abuse and neglect, discharge planning and the role of social work.

There was a significant increase in the number of patients seen by social workers (25 per cent over the past year).

Pharmaceutical Services

The Department was involved in a number of projects that were continued or initiated:

— A digital facsimile transceiver was installed in the Pharmacy Stores area of the Department to facilitate transmissions of drug orders to the Nova Scotia Hospital Pharmaceutical Supplies Distribution Centre.

— Outpatient prescription dispensing was phased out in 1984/85, except for limited prescriptions.

— Preliminary work on developing the Pharmacy modules for the Hospital Medical Information Systems project got under-

way. An initial patient medication profile program was developed, and work began on the drug formulary and inventory modules.

— A review of intravenous and related solution usage and quotas was initiated to improve the efficiency of the distribution system and management of the inventories.

— The Department extended hours of service (36 per cent increase) to address a number of problems, including increases in overtime, callbacks, use of the night cupboard and borrowing of drugs.

— Planning was initiated for a centralized chemotherapy/total parenteral nutrition (TPN) admixture program. This program, to be initiated in 1985, will result in the preparation of all chemotherapy and TPN drug admixtures in biological safety and/or laminar air flow hoods to protect staff from potential cancer causing agents.

Statistics

Prescriptions	114,506
Investigational Prescriptions	615
Ward Stock Units	213,233
Manufactured Units	7,686
Prepackaged Units	16,789
Sterile Manufactured Units	17,142
Radiopharmacy Doses	8,389
Drug Information Requests	979
Consults	618
Inservice Programs	43
Patients Monitored	415

Volunteer Services

Volunteer Services gave support to more than 5,000 patients.

Volunteers expanded services when special needs and events occurred, including Red Cross blood donor clinics and United Way participation. Escorts were provided to patients who had passes to leave the hospital for a few hours to go shopping or to banks.

Patient clinic assistance included clerical service, answering inquiries and accompanying patients to other hospital clinics for medical tests.

Over 6,000 diversional activity articles were distributed to patients, solaria, outpatient clinics and Point Pleasant Lodge.

Work/study volunteers provided service and gained experience in occupational therapy and physiotherapy clinics during the university year.

Statistics

Diversional Activity Articles	6,000+
Volunteer Hours Provided	48,000+
Patient Contacts	7,000+

Psychology Services

Psychology staff provided a variety of clinical, scientific, educational and consultative services. Consistent with the previous year, over 60 per cent of the total professional resources of the Department were devoted to clinical service, 25 per cent to departmental administration and development, and the remainder, 15 per cent, to teaching, research and consultation services within the Hospital and community.

There was a 13 per cent increase over the previous year in the volume of clinical services provided, and 18 per cent more activity devoted to clinical program development and the completion of the Operational Quality Review.

Clinical services were dedicated to patients referred either from Neurology and Neurosurgery (27 per cent), or from the Pain Management Unit (25 per cent), for diagnostic or neuropsychological assessments, instruction in pain control techniques and for physiotherapeutic treatment of anxiety and depression reactions that sometimes accompany chronic and/or debilitating conditions.

Clinical time was dedicated to psychiatry patients (17 per cent) and V.G.H. employees referred through the Occupational Health Department (13 per cent) for diagnostic and neuropsychological assessments, treatment of phobic and anxiety disorders, pain man-

agement, treatment of depressive and obsessive compulsive disorders, marital and family counselling and for stress management.

The remaining clinic services were provided to inpatients and outpatients from various other V.G.H. medical units (7 per cent) and to individual patients and groups from the Gynecological Oncology Unit (7 per cent) and the Diabetics Education Centre (5 per cent).

Besides assisting individual employees with personal and work-related difficulties, Psychology was also represented on Hospital committees, provided stress management workshops for Hospital staff, provided professional consultation to physicians, nurses and allied health professionals on psychological aspects of patient care, and delivered several presentations to and conducted workshops for community groups on health-related issues.

A collaborative research project with the Department of Gynecology on the adherence of follow-up of colposcopy patients was carried out by one of the Department's psychometrists.

Statistics

Inpatients	
Number of patient sessions	363
Outpatients	
Number of patient sessions	1,378

Occupational Therapy Services

With the successful completion of continuing education courses, many therapists were able to upgrade their programs. The computer glove program resulted directly from the attendance of one of the therapists at the American Burn Association meeting. The Ladies' Firefighters auxiliary's generous contribution of a Radio Shack computer and printer enabled the Department to implement this program for the burn patients. Inhibitive casting for neuro-related patients is being carried out and documented.

The Occupational Therapy Development was a key organizer in the assessment of an Inflammatory Polyarthritis course, which was available to therapists in the Maritime provinces. A videotape was also made to assist staff and students in this assessment process.

The Department became involved in Quality Assurance and reviewed splinting techniques, standardized routines, coordinated a splinting resource manual and set up an internal audit procedure.

The Occupational Therapy Department underwent a reaccreditation survey by the Canadian Association of Occupational Therapists and was accredited for another five years (1985-1990).

Statistics

Time Units	143,069
Weighted Units	583,873
Attendances	13,175

The average number of patients on the Outpatient Department waiting list was 75 in 1984.

The average number of splints provided during 1984-85 was 5,800.

DEPARTMENT OF MEDICINE

Improvements in technical aspects of medicine were balanced with efforts to improve methods for evaluating the care provided.

A few of the changes during the year included the following:
- Plans for the liver transplantation program were finalized;
- construction of new catheterization laboratories was begun;
- a major research contract was awarded to Cardiology by the National Institutes of Health;
- research activities in Infectious Disease were expanded;
- diagnostic facilities in Neurology were improved;
- the Hyperbaric Oxygen Unit began to function effectively;
- and improved methods were developed to deal with older patients.

Cardiology

During this past year the Coronary Care Unit was expanded to a 12-bed capability and a new monitoring system was installed. Plans for construction of three new Cardiac Catheterization Laboratories were completed and a new Pacemaker Clinic established. Expansion of Exercise Stress Testing and Nuclear Cardiology Laboratories came under active review. Research activities were expanded.

The Cardiology Service was awarded a six-year research contract by the National Institute of Health worth about $1-million to investigate left ventricular dysfunction. This hospital is one of eight centres in North America and Europe to get the contract.

Dermatology

This was a year of consolidation for the Division of Dermatology. The second group of Dermatology residents is being trained in association with the program at the University of Ottawa. Two clinics are held weekly at the IWK and Camp Hill Hospitals, with consulting service only being provided at the Halifax Infirmary. Weekly interdisciplinary clinics are attended by Dermatology residents, and three times yearly a clinic is held in association with the Dalhousie Dental School.

The first chapter of the Canadian Psoriasis Foundation, established here in 1983, grew from 50 to 60 local members to become national with over 400 members and six separate chapters.

Endocrinology

This Service is responsible for in-patient service/consultation, the endocrinology and Diabetes-Lipid Clinic and the Insulin Pump Program.

Five grants were received by members of this Service to continue their research.

Gastroenterology

The highlight this year was the formulation of a proposal for liver transplantation at the Victoria General Hospital. Dr. B.W.D. Bradley assumed the role of chairman of the Liver Transplantation Team and, together with Dr. Hinrich Bitter-Suermann, set up a series of meetings to accomplish a protocol discussed at a workshop in January, which was attended by international experts in liver transplantation. Details were presented at a Canadian Workshop on Liver Transplantation in Toronto.

General Medicine

The General Medicine Services at the Victoria General Hospital

continued to be overly full, with a bed occupancy in excess of 100 per cent most of the time. Mortality reviews continue approximately four times yearly.

The most significant advance in patient care is the development of the Stroke And Geriatric Assessment (SAGA) Project, which has been designed with the aid of Neurology and Geriatrics, as well as General Medicine. Approval was also granted for the establishment of a Geriatric Outpatient Clinic at the Dickson Centre.

Hematology

During the year, Hematology/Oncology was given divisional status.

A Hematology Manual was published outlining the standard approaches to the treatment of hematological malignancies and their complications. This manual is available to all house staff entering the Hematology Service. Grants were received from the Canadian Red Cross Society and the Dalhousie Medical Research Foundation.

Infectious Disease

The number of patients seen in consultation continued to increase. There was a rapid growth in out-patient service, with staff seeing outpatients three mornings per week.

Research grants were received from Health and Welfare Canada as well as from a number of drug laboratories. An urgent requirement is to develop greater research activities.

Nephrology

The objective throughout the years has been to provide tertiary-level patient care for patients with renal diseases from Nova Scotia and Prince Edward Island. The Division also provides teaching in Nephrology to undergraduates and graduate medical students and to many paramedical students.

The research arm of the Division was strengthened by collaborating with the Department of Physiology of Dalhousie University, in studies of the basic mechanisms of sodium and potassium handling by the renal tubule.

Services provided include consultations, transplantation clinic visits and supervision of hemodialyses. The number of patients on the hospital dialysis program was 86; the number of patients on home dialysis, 31.

Neurology Service

Highlights of the Neurology Service were the development of guidelines for residents on research, ambulatory care, and internal medicine experience on neurology; central ambulatory care, and internal medicine experience on neurology/ophthalmology unit in neuro-ophthalmology; Muscular Sclerosis Research Unit funded by the Department of Health; reorganization of basic neuroscience course for residents; and combination of the neurology courses in physiotherapy and occupational therapy.

Physical Medicine & Rehabilitation

This service has an excellent facility provided by the Nova Scotia Rehabilitation Centre, and the only Clinical Locomotor Function Laboratory east of Ontario.

It provides consultative services at the Victoria General Hospital, Camp Hill Hospital and the Halifax Infirmary. A large number of patients are seen through outpatient clinics, with 3,471 electrodiagnostic procedures carried out in 1984.

The total number of inpatients in 1984 was 427.

Respirology

The Respirology Service offers all diagnostic, pulmonary tests and a continuous respiratory therapy service that varies from simple oxygen to mechanical ventilators.

The opening of the Hyperbaric Oxygen Unit on June 25, 1984, was a highlight for the Respirology Service. The Unit provides treatment facilities for a number of clinical states, including carbon monoxide poisoning, decompression sickness and some specific infections, including gangrene and osteomyelitis. The Unit is currently being used in a study of multiple sclerosis.

Rheumatology

This service participates in clinical and research programs for the diagnosis and treatment of rheumatoid-related disorders. It also provides consultations in Metro area hospitals. Care was provided for 234 inpatients this year. The Ambulatory Care Program remains at its previous high level of activity, with the total number of new patient referrals at 550 and the number of follow-up visits at 1,826. Research grants were received from the Arthritis Society and the Dalhousie Medical Research Foundation.

Department of Urology

The Department introduced endourology, a new technique by which kidney and upper ureteric stones can be removed percutaneously. Approximately 100 patients have undergone the percutaneous procedure.

Department of Neurosurgery

Administrative

The Department continued to carry a high service load, with an increase of admissions of 108 over the last year, for a total of 1,672.

The Neurosurgical Clinic functioned satisfactorily as did the Halo Traction Clinic.

The Residency Program continued to attract good candidates, while the neurosurgical nursing staff remain active in the local chapter of the Canadian Neurological/Neurosurgical Nurses' Association, which the Department continued to support and fund in a small way.

Planning continued during the year for the renewal and re-equipping of the Neurosurgical Intensive Care Unit.

Academic

Ongoing studies continued on cerebral vasospasm, stress ulceration and complications of carotid endarterectomy.

The EC/IC By-Pass Study was completed and its results are to be published in July, 1985.

Department of Diagnostic Radiology

Scientific

The Department of Radiology, in conjunction with the Department of Radiology at Dalhousie University, developed a Radiology Research Foundation.

Administrative

The VGH Department of Radiology is the largest single department in Canada and performed 180,000 examinations in the calendar year 1984, an increase of approximately four per cent over those of the previous year. The trend to increase and develop the interventional techniques and expand the imaging modalities continued. The Department collaborated with the Department of Urology to introduce the Endourology Program.

The M-250 Euroscanner, an inexpensive British-produced CT scanner, was installed in the Dr. D.J. MacKenzie Building for clinical appraisal over a one-year trial period.

The comprehensive cost analysis of all examinations in the Department of Radiology was carried out. It is expected that this information will be very useful in directing cost analysis and cost containment for the Department of Radiology and the VGH.

Multi-Organ Transplant Program

Transplantation is a tertiary care service provided at the Victoria General Hospital for the four Atlantic provinces. The Multi-organ Transplant Program was established in December, 1984, in response to identified common needs and the increasing scope of new and expanding transplantation programs.

Kidney transplantation at the Victoria General Hospital is well recognized as the largest and busiest program in Canada. In 1984, 88 kidney transplants were done, bringing the program's total to over 570.

In July, 1984, approval was received to proceed with a Liver Transplantation Program. The team is planning the first liver transplant in the immediate future. Skills are being developed and maintained in a clinical skills laboratory.

Bone transplantation began and will enhance the Orthopedic Service and its efforts to address tertiary care needs to patients.

To support these transplantation programs, Organ Retrieval and Exchange has been reviewing and expanding its role, especially in the area of multi-organ donation, to meet the needs of all programs being established.

Physicians in the various programs of transplantation are involved in research in basic transplant biology and diagnosis of rejection and conduct experiments in transplants of liver and pancreas.

The members of the Multi-Organ Transplantation Program are cognizant of the need for support systems for families of cadaver donors and the staff who care for the multi-organ donors. Ways are being explored to provide understanding and support to these very important components of transplantation programs.

Department of Gynecology

During 1984 there was a major increase in utilization of inpatient facilities.

There was a steady increase in the use of the Ambulatory Care Centre, particularly with regard to colposcopy clinics. A research project on the follow-up of these patients is underway.

Semi-monthly meetings of the Department were held, in addition to the University Department meetings. Major emphasis this year was to establish, in collaboration with the Quality Control office, mechanisms to ensure that activities are evaluated.

Gynecology Fiscal Discharge Statistics

	6 Ward	Private	1984/85 Total	1983/84 Total
Patients	1,127	997	2,124	1,998
Patient Days	6,326	8,573	14,899	13,756
Average Length of Stay	5.6	8.6	7.0	6.9
Deaths	12	6	18	15
O.R. (Inpatient)*	782	874	1,656	1,519
O.R. (Private Outpatient)*	—	—	2,016	1,949
Emergency Admissions	356	43	399	377
Patients Receiving Consultations	181	174	355	306

*Based on the Canadian Public Health Association definition of patients operated on. Contact VGH Medical Records for further details.

Department of Anaesthesia

Clinical Service

The clinical responsibilities of the Department of Anaesthesia for operating room services for the year 1984/85 and preceding years are summarized below.

	1984/85	1983/84	1982/83	1981	1980	1970
General	17,331	17,218	17,514	17,090	17,306	17,820
Spinals	279	188	130	109	81	59
Nerve Blocks	1,327	1,148	1,244	834	659	583
TOTALS	18,937	18,554	18,888	18,033	18,046	18,462

Nerve blocks continued to increase, reflecting the increase in referral of patients with chronic pain problems to the Pain Management Unit.

Although the numbers of general anaesthesia procedures do not appear to have increased significantly, the magnitude and complexity of many of them have increased significantly over the past two to three years and thus, the overall demand on the Department of Anaesthesia continues to increase significantly.

The main emphasis in the Department was the establishment of a microcomputer system to support the administrative and teaching activities of the Department.

The audit and morbidity/mortality review process of the Department continued to proceed.

During the year the Department of Anaesthesia contributed to the development of the Liver Transplant Program by stimulating and developing the cost centre management processes for this program insofar as they affect the operating room facilities at the Victoria General Hospital.

Clinical Investigation

Research continued in cardiovascular anaesthesia following an extension of funding from the Nova Scotia Heart Foundation. During the year a coordinated study entitled the Kinetics of Fentanyl in Major Neurosurgical Procedures was carried out and funded for a prospective study comparing the effects of morphine and nalbuphine in general anaesthesia procedures in pain management during the postoperative period. Research was established for procedures in pain management, and collaborative research with the Division of Cardiology of the Department of Medicine. In general, research efforts of the Department of Anaesthesia have continued to increase over the past two years, evidenced not only by the amount of time spent and monies received, but also by the increase in publications.

Anaesthesia Technology
Operating Clinical Service

In keeping with long-range plans to keep abreast of technology, patient monitors with extended parameters were installed in cardiac operating rooms after extensive inservicing with all staff was completed. Ventilators were purchased and the gradual phasing out of the Airshield Ventimeter (20 years old) began. The Pain Management Section received a thermography unit, an extensive board for image intensification, and improved equipment for biofeedback techniques and electrical stimulation techniques in the management of chronic and acute pain. This reflected a definite improvement in the monitoring of anaesthesia and analgesia.

A three per cent increase in the overall surgical case list,

coupled with a five per cent increase in the operating budget, enabled the Department to allow only a slight increase in the cost per case of roughly two per cent (i.e., now $62.21/case).

Medical Records Department

The Medical Records Department received and processed the following records:

Inpatients	20,947
Outpatients (ACC)	75,941
Day Patients	10,566
Emergency Patients	42,708
TOTAL	150,162

The records of patients were requisitioned and sent to the following areas:

Inpatient	7,472
Outpatient (ACC)	87,394
Cancer Foundation	2,066
Emergency Department	8,256
Doctors' Offices (VGH)	1,633
Other	1,827
TOTAL	108,648

There were 6,015 requests (by mail, by phone or in person) for patient information from other health care facilities, doctors' offices, government agencies, etc.

Discharge Summaries and Operative Reports transcribed, mailed and filed were as follows:

	Reports	Units
Discharge Summaries	19,505	132,550
Operative Reports	14,290	50,445

Ambulatory Care Centre (ACC) letters to referring doctors and ACC chart notes transcribed, copied, mailed and filed amounted to the following:

Reports	Units
41,736	148,512

There were 76 research projects completed involving 14,253 records and 102 requests for statistical information.

A total of 14 patient care appraisals were carried out.

There were 7 records produced on court order and 7 search warrants served.

Central Patient Index (CPI)

Beginning in April, 1984, the plan to backload the manual patients index on computer was implemented. The backloading was completed ahead of schedule in August, 1984. The CPI was put into production November 15, 1984.

This was the essential first step to bringing up to standard the Registration Modules in the ACC, Admitting and Emergency Department.

Quality Assurance/Risk Management Program

Operating

During the last year, routine monitoring mechanisms were developed and implemented to provide information on potential patient care-related problems for the consideration of the various peer review committees throughout the Hospital. The general incident and medication incident reporting systems were revised (including a complete redesign of the forms), and monthly summaries are now prepared by floor. Ongoing reviews include:

— Emergency Department charts
— Appropriateness of admissions
— Decubitus ulcers
— Morbidity and mortality reports
— Pre/Post Op. diagnosis discrepancies

Many topic-specific audits were conducted during the past year (for the Clinical Appraisal Committee). They are listed below.

— Progress note review
— Infusion pump use survey
— Adequacy of operative record completion
— Infectious Disease consults
— Gastroplasty complications
— Rectal exams
— Respirology service mortality rate
— Complications of cardiac catheterization
— Digoxin utilization and response to elevated levels
— Identification of referring physician on admission sheets
— Verbal/telephone orders
— Complications of neuroangiography
— Day surgery chart screen
— Imagery-directed biopsies
— Patient pass use
— Complications of central line placement
— Adequacy of histories and physicals

In September, 1984, the medical staff executive approved in principle the QA/RM Program Plan. Since then, we have developed policy and procedure descriptions of all our activities, for inclusion in the Program manual.

Department of Surgery

One of the major advances was the inauguration of bone transplantation in the Division of Orthopaedic Surgery. This new operative procedure permits replacement of major portions of the skeleton that have been lost as a result of cancer or other conditions.

A further event was the development of a multi-disciplinary cancer clinic in cooperation with the Cancer Foundation.

Another innovation was the organization of trauma teams under the direction of the team captains. These teams comprise surgeons and physicians from various specialties for the purpose of looking after patients suffering from multiple injuries.

The existing programs continued to function well. The Division

of Cardiovascular Surgery performed 790 open heart operations this year. Further, there were 90 kidney transplant operations, and the liver transplant team continued to perform these operations in a laboratory each week.

In the field of education, the Department introduced the use of Objective Structured Clinical Examination for final year medical students. This is an improved method for evaluating technical skills, interviewing skills and clinical decision-making. It is expected that this method of examination will replace the oral examination.

Admission and Discharge Department

The workload in the Admission and Discharge Department at the Victoria General Hospital for the 1983/84 fiscal year increased in all areas as follows:

Inpatient Admissions	21,025 (+ 7.5 per cent)
Emergency Admissions	6,616 (+ 6.6 per cent)
Emergency Registrations	42,862 (+ 4.3 per cent)
Day Patients	13,388 (+ 23.9 per cent)
Average Daily Occupancy	84.9 (+ 1.4 per cent)
Average Daily Hospital Census	686.7 (+ 2.4 per cent)

Current year achievements included:

- Revision of organizational structure
- Identification of inappropriate admissions and high risk patients through daily screening
- Documentation of patients not requiring acute care beds and submission for extended care status to the Department of Health with subsequent approval for extended care status.
- Implementation of ambulance/travel arrangements and monitoring of inter-hospital transfers on Nursing Units

Department of Psychiatry

Administration

Increased specialization in the Department of Psychiatry started and will continue. The main areas were as follows:

1. An Eating Disorder Program was developed and is already in action.

2. There were more acute admissions, particularly involving suicidal behaviour since research in this area is a program at the VGH.

3. Patients requiring investigation in the borderline area of "neuropsychiatry" are to be admitted, when possible, to Psychiatry at the VGH.

The increased admission of more acute short-term cases and the improved efficiency in investigation and disposition will decrease the average length of stay for most types of patients, but eating disordered patients usually require a longer average length of stay.

Improved screening of patients prior to admission started, and referring physicians will be strongly advised to use local facilities when possible.

Psychiatry took an active role in the Metropolitan Mental Health Planning Board, and an increased role within this association will be necessary to properly integrate metro services.

Teaching, Clinical and Scientific Areas

Teaching. The very active teaching program continued at all levels: medical students (1st, 2nd and 3rd year), clinical clerks, interns, residents, nursing students and occupational therapy students.

Electroconvulsive Therapy (ECT). New equipment was purchased that will increase the variety of electrical stimuli and, thus, outdate electroshock therapy. It will allow EEG and EKG tracing to be done during ECT.

Observation Unit. A four-bed room reduced to three-bed capacity has been on trial use as an acute observation unit. It will be known shortly whether a permanent unit with structural changes will be necessary.

Nursing Services. The weekly community meeting was expanded, and a guest speaker was frequently involved for the purpose of patient education.

Work was started toward providing intensive teaching sessions for nurses working with eating disordered patients.

Social Work. An increased need developed for family assessments, education and short-term intervention. An average of 24 cases were handled monthly. Group sessions, with emphasis on discharge planning, were held weekly in conjunction with nursing staff.

Occupational Therapy. The regular program continued. The Micro-Tower Vocational Assessment Battery was discontinued due to decreased demand and time constraints. A consultation service to the Pain Clinic was implemented.

Research. The ongoing survey of suicidal behaviour in Halifax County continued. It is hoped that the survey can be expanded and include a prolonged follow-up of patients with lethally intended suicidal behaviour.

The work of the Task Force on Suicide is nearly completed and will provide a valuable update of suicidal behaviour in Canada.

Department of Radiation Oncology

Scientific

The Department of Radiation Oncology is showing evidence of progress in clinical research. The main thrust is through National Cancer Institute clinical trials, the Children's Cancer Study Group and local involvement in clinical research in association nationally with drug companies.

All physicians in the Department are involved in the National Cancer Institute clinical trials.

The Medical Physics Division continued to be productive in research as a joint venture with the Department of Dentistry and in developmental research in Radiation Oncology. A major thrust of the physics research has been in the field of hyperthermia.

Administrative

The year showed a considerable change in the referral pattern. There was an increase of approximately five per cent in the number of new referrals. The actual number of patients treated did not increase substantially, but a larger proportion were treated for cure with primary radiation rather than for palliation. The result is more detailed treatment planning and an increased number of treatments.

Medical Oncology showed a substantial increase in activity, with a marked increase in outpatient chemotherapy treatments, thus relieving the pressure on beds within the Hospital.

Department of Oral Surgery

Teaching

The members of the Department of Oral Surgery conduct undergraduate and graduate teaching to dental students, interns and residents. Several continuing education courses were given during the course of the year.

Research

Research projects are presently being carried out in the area of jaw biomechanics in conjunction with members of the Department of Engineering, Dalhousie University. Additionally, a project is about to be launched on blood flow studies in the maxilla.

Emergency Medicine Department

Following the leads established by cooperative effort, the Department pursued establishment of strong communication links between Emergency Medicine and the other departments in an effort to deal with the problems of providing primary care in a tertiary institution.

New developments in the Emergency Medicine Department included the following:

1) A trauma team was developed in collaboration with Emergency Department physicians to expedite care of multiple trauma victims.

2) A central patient process board was installed to make patient care more efficient.

3) Four committees were set up — Education, Staffing, Policy and Procedure and Pre-hospital Care — with representatives from Medicine, Nursing, Ambulance Attendants and Receptionists.

Infection Control Committee and Infection Control

Activities

Routine surveillance of nosocomial infection continued throughout the Hospital, with regular monitoring of all nursing floors for surgical wound infections, presence of *Serratia marcescens* (the marker for lapses in infection control procedures) and communicable diseases follow-up. Additional surveillance activities were adopted this year for nosocomial diarrhea (October, 1984) and nosocomial pneumonia (December, 1984). The pilot surveillance project on nosocomial infection under the auspices of the Laboratory Center for Disease Control (LCDC) in Ottawa was discontinued.

Current surveillance activities did not demonstrate any major outbreaks of wound infection, *Serratia* infection or communicable diseases.

Outbreaks. Two small outbreaks of nosocomial infection were noted in this fiscal year.

1) An outbreak of *Staphylococcus epidermidis* endocarditis was observed in patients undergoing cardiac surgery. The Infection Control Department reviewed operative procedures and made minor recommendations. Intraoperative monitoring of blood cultures and valve sampling continued, but no further increases in endocarditis were noted.

2) An outbreak of gastroenteritis affecting both staff and patients on 8W was noted in February, 1985. The cause of the outbreak remains undetermined, but a viral gastroenteritis seems likely.

Studies. As a result of high rates of infection in patients undergoing vascular surgery, the department undertook a survey of this particular condition, maintaining contact with family physicians for post-operative complications.

Increases in *Staphylococcus aureus* wound infections in patients undergoing spinal surgery were also studied to identify possible common factors. Recommendations will be made shortly based on these two studies.

During the course of the year, the Infection Control Department became more actively involved with hospital planning. Input by the Department consisted of assessing clean and dirty areas, traffic flow, and wash-up facilities in connection with plans for the Exotic Disease Unit, the proposed Cardiac Catheterization Unit, the Cardiovascular Intensive Care Unit and the Respiratory Clean-up Area.

Education Activities

Thirty-four educational sessions were conducted during the year, reaching a diverse constituency including the Dietary Department, Blood Collection Department, nursing students, nursing staff, allied health students and Hematology Department. Topics covered included isolation practices, communicable diseases information, transmission of infection, handwashing techniques and management of AIDS patients.

Environmental Rounds

Environmental Rounds were initiated, comprising members of the Infection Control Department, Nursing Department, Occupational Health Department, Hospital Management, Pharmacy, Quality Assurance/Risk Management and Plant Engineering Departments. The purpose of the rounds was to assess deficiencies and hazards in patient care and occupational health by doing spot checks in the Hospital. Recommendations for reducing hazards and deficiencies were made, and follow-up was conducted at subsequent rounds. These rounds were well received and will continue.

Department of Microbiology

There were increases in total specimens of 9 per cent overall, in Special Bacteriology 41 per cent, Virology 50 per cent and in Electron Microscopy 34 per cent.

The quality of laboratory performance was excellent, as monitored by both Canadian Association of Pathologists surveys and those undertaken by the Laboratory Centre for Disease Control (Ottawa). Internal laboratory evaluations remained satisfactory.

During the year administrative changes resulted in the merger of Immunology and Virology.

Computerization remained an important issue. Specimen entry in Virology and Immunology was computerized, but development of a satisfactory system was not achieved for any section.

Research and Development (Method Development) was busy with Elisa assays which, when introduced, will re-orient much of the work in all divisions.

Statistics
Total Specimens

	1984/85	1983/84	Percentage Increase/ Decrease
Clinical Bacteriology	71,896	68,618	+ 4.8
Clinical Immunology	45,847	46,138	- 0.6
Enteric Bacteriology	4,519	5,312	-14.9
Parasitology	4,933	5,782	+17.2
Special Bacteriology (GC)	28,989	20,535	+41.2
Biotyping	449	464	- 3.2
Respiratory Bacteriology	12,777	13,491	- 5.3
Mycology	6,151	5,808	+ 5.9
Sanitary Bacteriology	25,135	22,771	+10.4
Virology	13,383	8,900	-50.4
Electron Microscopy	2,595	1,935	+34.1
TOTAL	217,523	198,905	+ 9.4

Statistics
Total Specimens

	1984/85	1983/84	Percentage Increase/ Decrease
Clinical Bacteriology	2,504,156	2,431,177	+ 3.0
Clinical Immunology	1,067,839	1,088,510	+ 1.9
Enteric Bacteriology	332,515	342,868	- 3.0
Parasitology	272,920	226,931	+20.3
Special Bacteriology (GC)	324,038	255,540	+26.8
Biotyping	10,650	11,276	- 5.6
Respiratory Bacteriology	553,849	565,258	- 2.0
Mycology	291,137	278,618	+ 4.6
Sanitary Bacteriology	1,025,431	842,124	+21.8
Virology	1,722,994	1,442,355	-19.5
Electron Microscopy	177,331	159,530	+11.2
TOTAL	8,282,859	7,644,187	+ 8.3

Clinical Bacteriology

During 1984/85 the automated Sinsititre system was further established and expanded from two to four machines. Adjustments were made to the antibiotic profiles were reported and also to the range of antibiotics being tested.

The work-flow pattern continued with minor changes. During the year the total number of specimens received in the laboratory increased 4.8 per cent to 71,896. This continued the trend from previous years.

In late 1984 we introduced screening of C.A.P.D. fluid onto the Bactec blood culture system. This significantly reduced the workload for these specimens. A trial showed the new procedure to be more sensitive than the older filtration method and more convenient to operate.

Due to the large number of requests for serological tests requiring referral to outside laboratories, all such tests are now screened for clinical relevance.

Clinical Bacteriology Tests

	1984/85 Tests	1983/84 Tests	Percentage Increase/ Decrease
Blood Cultures	13,773	11,806	+ 16.6
EENT Cultures	6,742	5,616	+ 20.0
Urine Cultures	29,305	27,439	+ 6.8
Sputum Cultures	4,566	4,118	+ 10.8
Sputum Smears	796	894	-11.0
CSF Cultures	759	778	- 2.5
Anaerobic Cultures	3,810	3,383	+ 12.6
Misc. Aerobic Cultures	11,369	12,242	- 7.2
Misc. Other[a]	18,535	24,096	-23.1
TOTAL TESTS	89,655	90,372	- 0.8
TOTAL SPECIMENS	71,896	68,618	- 4.8
TOTAL UNITS	2,504,156	2,431,177	- 3.0

[a] Includes burn biopsies, Leptospira cultures, special stains, agglutination, antibiotic synergy tests, CSF biochemistry, antibiotic MICs and MBCs, bowel counts and ACBs.

Clinical Immunology

The Apple 2E computer specimen entry and labelling system introduced in January, 1984, has become an integral component of the daily operation. The addition of a new INFOSTAR program in the fall has allowed the generation of daily worksheets, monthly reports and daily back-up to be more efficient.

The Section assisted in the definition of two rubella outbreaks in townships in New Brunswsick, and also identified a congenital rubella in Nova Scotia.

The Section participated in two epidemiological studies during the past year, one for hepatitis B antigen and antibody requested by the Nova Scotia Department of Health, and the other for rubella-immunity among university students in Sheriff Hall, requested by the Dalhousie Student Health Unit.

Enteric Bacteriology

This Section comprises the separate laboratories for Enteric Bacteriology, Parasitology and Special Bacteriology (GC). The total workload for this section increased from 31,244 in 1983/84 to 39,739 specimens (+ 27.2 per cent) in 1984/85, representing 836,615 units compared with 940,122, an increase of 12.4 per cent. This increase occurred in the Parasitology and Special Bacteriology Laboratories and was caused mainly by the takeover of routine vaginal cultures by the Special Bacteriology Laboratory.

In the Enteric Laboratory the workload decreased; however, there was a significant outbreak of *Salmonella typhimurium* in the Atlantic Provinces from April to August. This outbreak originated in Prince Edward Island, and cheese produced at the Atlantic Dairies Ltd. dairy was implicated as the source. During this period we identified 185 *S. typhimurium*, which were probably related to this outbreak, and the tail-end of an outbreak that was occurring in Cape Breton in March. *S. minnesota* was isolated in April, the first isolation of this serotype in Nova Scotia. *S. poona* and *S. arizonne* were isolated from turtle water in Cape Breton. Investigation of turtle water in the Halifax area produced *S. poona* alone.

There were two cases of hemorrhagic *E. coli 0157:H7 in the Halifax area.*

Isolates of Campylobacter jejuni and *Yersinia enterocolitica* continued to increase. Serotyping of *C. jejuni* performed at the National Enteric Reference Centre of LCDC in Ottawa indicated that there may have been an outbreak of this organism in Nova Scotia; however, no further information is available.

The Special Bacteriology (GC) Laboratory experienced a 41 per cent increase in the number of specimens submitted. This large increase is related to the takeover in May, 1984, of all vaginal specimens for the diagnosis of non-specific vaginitis. Non-specific vaginitis is indicated by the presence of "Clue" cells in Gram-stained smears. Pneumococcal typing continued to be processed in this laboratory; however, staphylococcal phage typing was discontinued in March, 1985, and future specimens will be referred to the National Staphylococcal Phage Typing Centre at LCDC in Ottawa.

The Parasitology Laboratory continued to be very busy. The number of specimens submitted increased by 17 per cent and isolates by 93 per cent. Identification of protozoa more than doubled.

Public Health Bacteriology

This year there was an overall decrease of 5.3 per cent in the total number of specimens submitted to the Section of Respiratory Bacteriology.

A total of 6,793 sera were submitted for antibiotic assay. This corresponded to an increase of 2.6 per cent over the previous year. Part of this increase resulted from the inclusion of Netilmicin in our program.

There was an approximate 100 per cent increase in the number of specimens submitted for study for Legionella species. This resulted from a nosocomial outbreak of Legionnaires' Disease at Camp Hill Hospital. Bacterial culture and/or serological studies were carried out on appropriate respiratory secretions, lung tissue and/or blood.

There was an approximate 50 per cent increase in the number of specimens submitted for Mycoplasma studies. There was a large number of positive specimens for *U. urealyticum* compared with the previous year, and also an increase in the number of other species of Mycoplasma isolated.

There was a drop of approximately seven per cent in both the number of specimens submitted for *M. tuberculosis* studies and the corresponding sensitivity studies. The number of different species of Mycobacteria, other than *M. tuberculosis* isolated, showed an interesting increase, with 37 isolates of *M. avium-complex* and a modest increase in the number of *M. gordonae* isolates. The reason for the increase in the number of isolates of *M. avium-complex* is not known but may be related to an increased number of immunosuppressed or immunocompromised patients.

During the year a complete change in methodology was instituted. Specimens are now being studied by the newer semi-automated Bactec System.

Mycology. An increase of 5.9 per cent in the number of specimens, involving a 4.6 per cent increase in total units, was evident over the previous year. The largest was noted in Miscellaneous cultures (22.0 per cent). This resulted from an increase in Dermatology clinics.

Sanitary Bacteriology. There was a marked increase in the number of specimens submitted for examination (10.4 per cent), reflecting a 21.8 per cent increase in units over the previous year. This was noted in all types of specimens submitted and, in particular, those from swimming pools and swimming areas. There was an overall increase in the number of dairy specimens submitted, especially in ice cream analysis. Food bacteriology, resulting from industrial contamination of cheese, accounted for a 45 per cent increase in food specimens.

Virology

There was a major increase in specimens received this year, from 10,835 to 15,978 (+ 47 per cent), in tests carried out, from 21,369 to 27,447 (+ 28.4 per cent), and in units of work, from 1,601,885 to 1,900,325 (+ 18.6 per cent), with no increase in staff. During the year surveillance was carried out and changes made to reduce labour-intensive techniques and substitute less expensive and/or less time-consuming methodologies, if the results could be justified. For example, the preparation and use of primary human amnion tissue cultures was replaced with a continuous cell line of embryo lung cells.

Requests for *Chlamydia trachomatis* culture or direct-specimen examination increased by 74.6 per cent. Part of this increase can be accounted for by the introduction of direct-specimen testing (using Syva monoclonal chlamydia antibody conjugated to fluorescein isothiocyanate) and concomitantly making available to physicians the direct-specimen collection kit for Syva. This eliminated the requirement for transport medium and rapid transit of specimens.

A measles survey was undertaken by the Community Health Services, Department of Health, in which we cooperate through serological testing and direct specimen examination of patients believed to be clinically ill with measles virus infection.

Another study was undertaken with laboratory involvement to test clinical specimens from patients involved in an Acyclovir project (primary herpes) and a Foscarnet project (recurrent herpes).

Research and Development

Work is continued on various applications of ELISA methodology, especially in the area of quantitating anti-cardiolipin antibodies in human sera. The cross-reactive potential of anti-phospholipid antibody encourages speculation on its role in pathogenesis, even though its occurrence is not always specifically related to the etiology of the disease process. Nevertheless, our interest in phospholipid antibodies is in their potential to serve as disease markers as, for example, in cases of antinuclear antigen negative lupus and other related syndromes.

NURSING DIVISION

In the Victoria General Hospital, the Nursing Division comprises approximately one-third of the staff (more than 1,200 people) and receives approximately one-third of the budget.

A major accomplishment by the Nursing Division during the year, which had an impact across the total Hospital, was the implementation of a Patient Classification System. Staff nurses caring for patients on each unit indicate daily the needs these patients will have over the next 24 hours.

This information is processed by computer to determine the total amount of patient needs per Nursing Unit. This is applied to a unit-specific formula to determine the number of Nursing hours required to meet these needs. Unit-specific factors, such as geography (number of wings, number of single rooms), type of medical service, and number of medical sub-specialties, were taken into account in the formula. A monitoring system to maintain the integrity of the system was also implemented.

This system may now be combined with the previously implemented Quality Assurance Monitoring System for a more complete Nursing Management System.

Combining staff scheduling with patient classification on computer will greatly facilitate the objective of providing the appropriate

number of staff required to care for our patients to the proper Nursing Unit on the correct shift.

As of March 31, 1985, we had one year of data, which will be useful as a baseline for determining patient care requirements as they affect the amount of staff required. The workload indicator means the equivalent number of patients requiring an average amount of care in the institution. For instance, during the six-month study in 1984, our 800-bed hospital had the work equivalent to 898 typical patients. By the end of March, with a full year of data, this figure had increased to just under 1,000.

A major effort in cost restraint was made by Nursing. The formal program was introduced hospital-wide in January, 1985.

Nursing made a major time and knowledge contribution to the Travenol study, looking at the cost of three typical categories of patients in our insitution. Much of this information came from data on Nursing Units and Nursing records.

Two major events relating to Nursing staff occurred in 1984/85: in October it was decided to hire all 1984 VGH graduates who had not yet obtained employment and were available for work. Twenty-seven new graduates were hired for a six-month period in supernumerary positions to give them experience and, thus, a better chance in the job market. At the end of the six months, all had jobs, either at the VGH or elsewhere.

Significant events in services provided included the opening of a Hospice Family Room in May of 1984. This was an asset to many of the relatives of the 654 new patients admitted to the program during the year.

Nursing personnel participated in approved research conducted by others in the Hospital, including physicians, physiotherapists and pharmacists. One of these studies focussed on women and coronary artery disease. Others included a Nutrition Support Team researching total parenteral nutrition, the Stroke And Geriatric Assessment (S.A.G.A.) Team and drug studies, including cyclosporin, artificial saliva, and specific drugs for ovarian cancer.

Nursing continued to coordinate the multidisciplinary patient education activities, particularly as they related to patient educa-

tion on television. Group teaching of heart patients, respirology patients and other patients was implemented where applicable.

Equipment evaluated ranged from Foley catheters, disposable procedure gloves and Directel (a telephone for people unable to grasp a regular phone), to disposable dressing trays, patient chart holders and germicidal cleaning solutions. New procedures tested were changes in standardized charting for nurses, patient education programs and narcotic control procedures.

Nursing supported the Discharge Planning Project with the cooperation of Orthopedic Nursing Units.

A Psychiatric Observation Room was set up in January, 1985, for a six-month trial. It was to be used for patients requiring above-average observation and/or more extensive nursing care.

Many head nurses paid tribute to the volunteers working on their units and mentioned some of the specific programs they were supporting, such as the Hospice, the Dianna Bleakney Guild and the Cardiovascular Support Visitors. The Fire Fighters Burn Treatment Society and Dartmouth Fire Fighters' Ladies Auxiliary also played an important role in supporting care for burn patients in the Hospital.

The Clinical Promotion Project is an ongoing major research project of national interest to Nursing. This project is being conducted in collaboration with University of Alberta hospitals in Edmonton. It is a longitudinal study that will develop, describe and implement a system to identify and reward clinical nurses in relation to their levels of demonstrated competence and the contributions they make to providing for patient care. The Victoria General Hospital has been conducting the bulk of the work since January, 1985.

A major Quality Assurance Monitoring System, which is a systematic peer review of nursing care on each of the 36 Nursing Units, is well maintained. It has an ongoing system of identifying inter-rater reliability and updating the criteria used to measure the overall quality of care on Nursing Units.

Maintenance of manuals is an ongoing activity. Three major nursing manuals include: *The Clinical Procedures, Administrative Procedures* and *Standard Care Plans*.

There was central liaison with the Budget Office to improve reporting accuracy and speed. Progress was made toward more accurate recording of costs of the constant movement of staff, temporarily and shift-by-shift, to give head nurses a more accurate picture of the cost of running their units.

Staff turnover during the year was less than that of the previous year. Thirty-five fewer people in the RN and CNA categories left the Hospital. We began to see a trend of more people returning to university to work towards a Nursing degree.

A 25 per cent refurbishing of the bed mechanics during the year allowed plans for bed replacement dollars to be deferred to other hospital equipment.

Nursing education programs included such topics as Quality Assurance, The Research Process, Management of Nursing Practise for Various Levels of Managers, Legal Ethical Aspects of Health Care, Palliative Care, Care of Young Adults with Cystic Fibrosis, Care of an AIDS Patient, Peritoneal Dialyses, Emergency Care of Burn Victims, Gyn-Oncology Care, Ostomy Care, Orthopedic Workshops, Neurological and Neurosurgical Workshops, Advanced Concepts in Respiratory Nursing and a Recovery Room Seminar.

Arrangements were made for the support of numerous categories of students in the clinical setting. Orientation of 221 new Nursing Unit staff was arranged during the year. Programs to train our own staff nurses to act as preceptors for new staff during orientation were provided. Some 338 staff were given opportunities to update their Cardio Pulmonary Resuscitation (CPR) skills, and 35 graduated from Basic Cardiac Life Support (BCLS) programs. The Continuing Education Department also handled 81 requests from individuals and units involving 1,000 staff for specifically designed programs. Over 500 students from various nursing programs and years were supported, and 36 re-entry nurses were provided clinical experience on our Nursing Units.

Lectures were presented by VGH Nursing staff at Dalhousie University to nursing, physiotherapy and medical students on such diverse subjects as "Research and the Practice Setting", "Legal Ethical Aspects of Health Care", "Hospice Nursing", "Respirology" and "Human Sexuality", among others.

Papers were published in professional journals by VGH Nursing staff on such topics as "The Role of Hospice Volunteers", "Caring for the Dying Patient", "Building a Hospital Nursing Research Department", "Coping Behaviours of the Accidentally Injured", "Job Satisfaction and Interruptions in the Planned Time of Nursing Managers" and "The Hospital Patient Education Committee".

ADMINISTRATIVE SERVICES DIVISION

Operations Department

Medical — Ambulatory Care

Patient clinical visits for 1984/85 totalled 72,742, as compared to 58,441 in 1983/84, representing a 24 per cent increase. Total Ambulatory Care Centre visits numbered over 260,000.

The appointment of new physicians and the continued integration of private patients resulted in the expansion of the following clinical services: Infectious Disease, Orthopedics, Respirology and Neurology.

A policy regarding informed consent for minor procedures performed within the Ambulatory Care Centre was developed and implemented.

A major revision in the provision of pharmaceutical services to ambulatory care patients became effective in December, 1984. This change in practice required the majority of outpatient prescriptions to be filled by outside pharmacists.

Administrative

The major responsibilities of the Operations Division are Physical Plant, Materiel Support, Sterile Supply Services, Biomedical Engineering, Laundry, Fire Safety and Security, Housekeeping, Porter Escort and Audio/Visual Services, as well as Ambulatory Care.

Ongoing planning and development of computerization in ambulatory care continued over the past year. This included formation of ambulatory care analysis teams to plan the development of regis-

tration, appointment booking and statistical reporting.

The first application of patient registration was implemented in November, 1984. Implementation of appointment booking applications began in January, 1985, with the tentative completion date set for June, 1985. Statistical reporting applications are currently in the development stage.

Management Engineering conducted a study to assess the work flow in the Hospital laundry. The study will assist necessary efforts to reduce expenses by a significant amount for the next fiscal year.

The former site of the School for the Blind was made available for a parking lot for visitors and patients of the Victoria General.

A new parking proposal was submitted that would move visitor and patient parking closer to the Hospital and relocate to the South Park Street lot some staff who have privileges to park on-site.

Training and Development sessions for Operations Division managers commenced on January 18 and continued every second week.

A consultant was engaged to conduct a preliminary analysis of Materiel Management. The report highlighted current problems in the Materiel Management Department, areas of potential savings and improvements and a recommended plan of action to achieve savings and improvement.

As in all divisions, the Operations Department forwarded recommendations to the Management Committee to achieve a five per cent decrease for the fiscal year 1985/86, after a deficit was identified in the Hospital's budget for 1984/85.

The Dr. Robert Clark Dickson Building air cooling systems, which proved rather unsuccessful during the summer of 1984, had several modifications incorporated during the past winter.

The concept of program management was initiated as nursing staff from inpatient units supplied staff support in Endocrinology and Rheumatology.

Finance Department

The Finance Department has general responsibility for maintaining the following financial services:

- Accounting Systems and Procedures
- Budget Preparation and Administration
- Financial Information/Education
- Extra-Divisional Involvement
- Divisional Management

Accounting Systems and Procedures

Revenue Accounting. A policy paper governing credit granting, developed by the Revenue Accounting Section, was adopted for implementation by the Management Committee to reduce bad debt write-offs and improve efficiency in the overall billing and collections processes.

A computer-generated cash report was accepted by the Department of Finance in place of the former manually prepared version, resulting in significant savings of clerical and typing time.

A review by Revenue Accounting of Physiotherapy's outpatient visit reporting practices led to a streamlining of the process.

Follow-up on information available on admission will be improved now that Revenue Accounting has gained access to the Central Patient Index. This is in addition to the procedural provisions of the credit policy and collections follow-up procedures also developed.

Expenditure Accounting. The volume of bad batches related to Accounts Payable processing was cut by better than half due to procedural changes made by Payable's staff. Further, improvements were made to keep possible problem batches out of the overnight streaming process, so that updates can be completed by morning.

A systems feature allowing simultaneous entry on orders and receipts to the Accounts Payable and Inventory systems was implemented and will cut the data entry time in half.

Methods of accounting for revenues, cost recoveries and cost transfers were reviewed and discussed. Principles for the recording of cost recoveries in particular were developed, discussed with the Hospital's Finance Committee and with the Department of Health, and will be reviewed for implementation during the 1985/86 fiscal year.

Payroll Accounting. An Analysis Team, which was struck to review the payroll and personnel functions and chaired by the manager of Accounting Services, made recommendations concerning reporting and information requirements from an automated payroll system.

General Accounting. Closing the books for the year 1984/85 on May 1 represented a two-week improvement over the prior year. This was made possible through negotiations with officials in the provincial Department of Finance to speed up the provision of year-end payroll information.

Budget Preparation & Administration

All policies and procedures for Budget and Control Services were documented during the year. In particular, those relating to the annual Department of Health budget submission, the spring internal budget allocation and maintenance procedures.

Financial Information/Education

The Senior Managers' Development Program in April included sessions ranging from a simplistic overview of general accounting principles to an introduction to the concepts of program accounting. Other efforts included a session for "Lunch and Learn", and several departmental workshops and question and answer periods.

Occupational Health Department

Administration

Policy and Procedure. Staff conducted a complete review and revision of the 1982 Preplacement Health Assessment Policy and designed a new Video Display Terminal (VDT) User Health Policy. Work continued on the Contact Lens User Policy and the Anti-

neoplastic Handling Guidelines. Plans to revise the Employee Assistance Program (EAP) and Hospital Smoking Policy, Immunization and Occupational Health Standing Orders were discussed.

Training. Occupational health nurses designed and conducted approximately 30 worksite health awareness activities covering a variety of health and safety topics. Numerous recreation, fitness and leisure activities were organized and facilitated by the Staff Activities Coordinator and the Victoria General Hospital Recreation Association (VGRA), including many for the first time. Membership in VGRA increased nearly 300 per cent.

Services. As in the past year, total contacts decreased slightly, by 1.5 per cent.

Significant *increases* were shown again in Clearance of Dietary by workers, up 29.9 per cent, and new increases noted in preplacement Health Assessments, up 16.4 per cent. Treatment of Work Accidents increased by 12.4 per cent, Immunization procedures were up by 11.1 per cent, General Health Clearance was up by 8.1 per cent and referrals for Employee Assistance increased by 14 per cent and, under the Attendance Improvement Program, were up 11 per cent.

Again, skin problems, followed by musculo-skeletal problems, were the most frequently presented concerns.

Accident totals showed little change from 1983/84, although a slight change in incident to direct cost ratio was evident, from 1:2.35 to 1:2.12. Despite numerous programs to assist work areas to decrease risks and educate employees in safe work practice, little significant improvement was achieved.

As in years past, falls and blows were the most frequently reported accidents, followed by accidental innoculations and back problems. This year, for the first time the highest direct cost accidents were skin problems, where 80 per cent of the total required medical aid and/or layoff. Back problems, however, were a close second, with 78 per cent direct cost. An interesting development in accidents reported this year involved contact with foreign materials, numbering 59 incidences of chemical splash, inhalation and foreign bodies.

Increasing awareness of health and safety matters resulted in significant increases in the number of hazard assessments conducted: more than six average per month of a total of 74 assessments at 47 work sites. The Occupational Health Department participated in five Environmental Team Rounds and carried out over 50 work site routine surveillances. By year end 1985/86, routine surveillances will be in place.

Management Engineering

During the year, 47 projects were carried out by a total staff of 15 systems and support personnel.

Information Systems

A large-scale Sperry 1100/72M main-frame computer was installed, remotely linked to the Government Services Data Centre.

Applications to run central patient records and the patient administration systems for Ambulatory Care were implemented on a network of 57 terminals.

In addition, an O.R. Reporting System was installed and small-scale support systems provided to Pharmacy and Bio-medical Engineering.

This was the first year of a two-and-one-half-year growth plan to install a comprehensive patient-oriented Hospital/Medical Information System, with up to 240 terminals and printers located throughout the Hospital.

Administrative support systems work was predominantly spent on a system to automate Establishment Control records in the Personnel Department. Planning for automating payroll and cost functions was also completed.

A multi-user word processing system was installed to improve transcription productivity in Medical Records.

Industrial Engineering

The Industrial Engineering strength of the Department was increased to two qualified industrial engineers and one manager.

Over 30 projects were completed, including a major procedure costing study and a cost modelling system for Radiology.

Other work included methods and productivity studies in Laundry, Pharmacy and Medical Records. In addition, a significant amount of work was done to establish a statistical methods development and analysis service to assist all departments.

Personnel Department

Relocation to the Bethune Building made Personnel Services more accessible to the public and resulted in a marked increase in traffic.

The budget restraint imposed in December resulted in a delay in filling most vacant positions, with most requests being reassessed by the directors concerned before approval for staffing, while others were put on hold pending further review. Departments will continue to assess their needs very carefully with each vacancy.

Twenty-six requests were submitted to the Summer Employment Program, while seven requests for support for 11 students were submitted for the Student Internship Program. Seven of the fully funded normal work projects were approved. All projects under the internship program received funding, although some were reduced in the number of employees allowed. Six work-experience students were accommodated.

Seven in-house computer education workshops were organized in response to the demand for basic computer knowledge, of which six were held with 134 employees attending. Because of the heavy demand for qualified medical transcriptionists, a second course was organized in Medical Transcription/Word Processing; this was true also for the Medical Terminology course.

Support was provided to eight non-certified nursing attendants to enroll in the Dartmouth Regional Vocational School to upgrade their skills. They will return to work on successful completion of their course in 1985.

Efforts were continued to reduce absenteeism. The Hospital held a buffet banquet in November to honour employees who had perfect attendance in 1982/83 and/or 19983/84. There were 173

employees eligible for an Award of Merit for Exceptional Attendance.

The newly formed Retired Employees Association elected a full slate of officers and drafted and approved its constitution and by-laws. The Association was successful in obtaining a New Horizons grant to cover supplies, furniture and equipment and continued to provide valuable volunteer support to the Hospital.

A new I.D. card was designed, approved and issued to all VGH personnel, including courtesy staff. As well, a new orientation program was drafted and initiated.

Educational Services Division

Further centralization of the Hospital's educational activities took place during the past year with the consolidation of Health Sciences Schools, the new Department of Management Development and Training and the Health Sciences Library under the new Educational Services Division.

Allied Health Programs

The director of Allied Health Programs focussed on the administrative coordination and further development of the five schools to improve educational standards.

A faculty performance appraisal process and tools were developed and implemented and will be assessed in the new fiscal year.

Of particular note this year was the School of Cytotechnology. Under the direction of the school supervisor, curriculum and operational policies and procedures were developed to be implemented in the fall of 1985.

In response to the accreditation survey of the School of Nuclear Medicine Technology, a conjoint program structure was established among the Victoria General Hospital, the Halifax Infirmary and the Nova Scotia Institute of Technology.

Implementation of the first educational program in Diagnostic

Medical Ultrasound Technology continued this year. The first graduating class will be next year.

School of Nursing

Academic promotion criteria were revised in response to the 1984 accreditation report. Specifically, an examination blueprint for total program and testing procedures and processes was established. These changes have effected a higher promotion standard.

A workload measure formula/tool was implemented to establish equitable faculty workloads. As well, a faculty performance appraisal process and tools were developed and implemented.

Follow-up evaluations on 1984 graduates, completed by employing agencies, indicated that of the 68 graduates surveyed, 94 per cent were meeting or exceeding employer expectations.

Student Services

Services to students from this office continued to be consolidated throughout the year. Admission criteria for all schools were further defined and standardized, and Admission Committees for the selection of students were fully operational during this academic year.

General statistics on students were as follows:

Class of 1984

School	Number Graduated	Percentage Attrition Rate	Percentage National Registry Pass Rate
Radiological Technology	9	0.0	77.8
Cytotechnology	7	0.0	85.7
Nuclear Medicine	3	25.0	100.0
Respiratory Therapy	12	29.4	100.0
Nursing	128	15.7	91.4

Class of 1985

School	Number of Applications Received	Number Admitted
Radiological Technology	38	10
Cytotechnology	6	4
Nuclear Medicine	N/A	4
Respiratory Therapy	76	17
Nursing	478	149
TOTALS	598	184

Health Sciences Library

The past year was one of change for the entire library system, as a comprehensive proposal for centralized library services was accepted.

Internal operations within the Library were revised and communications with other departments were increased, with the goal of improving services and efficiency.

Department of Management Development and Training

The office for Management Development and Training was established in 1984.

Supervisory training programs were conducted in several departments, and the Kodak "Xcellence Program" — critical skills for supervisory staff — was purchased and piloted.

ANALYSIS OF HOSPITAL SERVICES
April 1, 1984 — March 31, 1985

Service	Male	Female	Total	Total[3] Deaths	Death Rate	No. of Autopsies	Autopsy Rate	Patients Receiving Consults	Consult Rate	Total Days	Average Days Stayed
Medicine	3,203	2,626	5,829	405	6.9%	121	29.9%	2,075	35.6%	80,765	13.9
Transplant	99	40	139	—	—	—	—	42	30.2%	2,260	16.3
Radiation Oncology	212	212	424	42	9.9%	5	11.9%	162	38.2%	4,792	11.3
Psychiatry	77	199	276	1	0.4%	1	100.0%	134	48.6%	10,122	36.7
Courtesy Surgery	21	68	89	2	2.2%	1	50.0%	51	57.3%	916	10.3
Surgery A-D Incl.	1,943	2,331	4,274	165	3.9%	40	24.2%	1,122	26.3%	48,653	11.4
Surgery I.C.U.	29	25	54	51	94.4%	23	45.1%	34	63.0%	792	14.7
Cardiovascular Surgery	742	340	1,082	1	5.6%	14	23.0%	256	23.7%	15,550	14.4
Orthopedics	1,023	916	1,942	18	0.9%	1	5.6%	411	21.2%	23,130	11.9
Plastic Surgery	452	373	825	4	0.5%	—	—	140	17.0%	10,630	12.9
Urology	1,601	451	2,052	19	0.9%	2	10.5%	520	25.3%	17,863	8.7
Neurosurgery	1,015	596	1,611	75	4.7%	18	24.0%	500	31.0%	21,362	13.3
Oral Surgery	82	142	225	—	—	—	—	18	8.0%	1,044	4.6
Otorhinolaryngology	—	—	—	—	—4—5	—	—	—	—		
Gynecology	—	2,124	2,124	18	0.8%	5	27.8%	355	16.7%	14,899	7.0
Newborn	—	1	1	—	—	—	—	—	—	1	1.0
GRAND TOTAL	10,502	10,445	20,947	861	4.1%	231	26.8%	5,820	27.8%	252,579	12.1

3Of these 861 Deaths, 155 Deaths were within 2 days' stay in Hospital. Effective April 1, 1983, all private patients with a Courtesy/Consulting Dept. of Surgery staffman are serviced according to the subspecialty of the physician.